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Relevant Publications:

Characterization of Single-Crystal $\text{-Al}_2\text{O}_3(0001)$ and (1120) Surfaces and Ag/ Al_2O_3 Model Catalysts by Atomic Force Microscopy

G. Beitel, K. Markert, J. Wiechers, J. Hrbek and R.J. Behm in "Adsorption on Ordered Surfaces of Ionic Solids and Thin Films", eds. J. Umbach and H.-J. Freund, Springer-Verlag, Berlin 1993, pp. 71-82.

STM Study of Au growth on a S-modified Ru(0001)

J. Hrbek, A. Schmid, M.C. Bartelt and R. Hwang
Surf. Sci. **385**, L1002-9 (1997).

Identifying the Forces Responsible for Selforganization of Nanostructures at Crystal Surfaces.

K. Pohl, M.C. Bartelt, J. de la Figuera, N.C. Bartelt, J. Hrbek and R.Q. Hwang, Nature **397**, 238-241(1999).

Multiplication of Threading Dislocations in Strained Metal Films under Sulfur Exposure. J. de la Figuera, K. Pohl, A.K. Schmid, M.C. Bartelt, J. Hrbek and R.Q. Hwang , Surf. Sci., **433-435**, 93-98(1999).

Vibrations of a Two-Dimensional Vacancy Island Crystal in a Strained Metal Film.

K. Pohl, J. de la Figuera, M.C. Bartelt, N.C. Bartelt, J. Hrbek and R.Q. Hwang, Surf. Sci., **433-435**, 506-511(1999).

Interaction of Sulfur with Well-Defined Metal and Oxide Surfaces: Unraveling the Mysteries behind Catalyst Poisoning. J.A. Rodriguez and J. Hrbek , Acc. Chem. Res., **32**, 719-728(1999).

A Prelude to Surface Chemical Reaction: Imaging the Induction Period Of Sulfur Interaction with a Strained Copper Layer.

J. Hrbek, J. de la Figuera, K. Pohl, T. Jirsak, J.A. Rodriguez, A.K. Schmid, N.C. Bartelt, and R.Q. Hwang, J. Phys. Chem., **103**, 10557-10561(1999).

Interaction of Adsorbates on Strained Metallic Layers.

J. Hrbek and R.Q. Hwang, Current Opinion in Solid State and Mater. Sci. **5**, 67-73(2001).

High Resolution Photoemission Studies of Sulfur Interaction with Model Catalytic Surfaces.

J. Hrbek, J.A. Rodriguez, T. Jirsak and J. Dvorak, J. Electron Spect. Rel. Phen. **119**, 201-206(2001).

Formation of Mo and MoS_x Nanoparticles on Au(111) from $\text{Mo}(\text{CO})_6$ and S_2 Precursors: Electronic and Chemical Properties.

J.A. Rodriguez, J. Dvorak, T. Jirsak and J. Hrbek, Surf. Sci., **490**, 315-326(2001).

Interaction of Sulphur with Bimetallic Surfaces: Effects of Structural, Electronic and Chemical Properties.

J. A. Rodriguez and J. Hrbek, In The Chemical Physics of Solid Surfaces, Vol. 10, Surface Alloys and Alloy Surfaces, ed. D.P. Woodruff, Elsevier, NY 2002, p. 466-494.

Synthesis, Electronic and Chemical Properties of MoO_x Clusters on Au(111)

Z. Chang, Z. Song, G. Liu, J.A. Rodriguez and J.Hrbek, Surf. Sci. **512**, L353-360(2002)

Activation of Gold on Titania: Adsorption and Reaction of SO_2 on Au/TiO₂(110)

J.A. Rodriguez, G. Liu, T. Jirsak, J. Hrbek, Z. Chang, J. Dvorak and A. Maiti, J. Am. Chem. Soc. **124**, 5242-5250(2002)

A Novel Growth Mode of Mo on Au(111) from a $\text{Mo}(\text{CO})_6$ Precursor: An STM Study

Z. Song, T. Cai, J.A. Rodriguez, J. Hrbek, A.S.Y. Chan and C.M. Friend, J. Phys. Chem. B **107**, 1036-1043(2003)

The Deposition of Mo nanoparticces on Au(111) from a Mo(CO)₆ precursor: Effects of CO on Mo-Au
Intermixing

P. Liu, J.A. Rodriguez, J.T Muckerman and J. Hrbek, Surf. Sci., in press

Interaction of CO, O and S with metal nanoparticles on Au(111): A Theoretical Study

P. Liu, J.A. Rodriguez, J.T Muckerman and J. Hrbek

Phys. Rev. B, in press